

REMARKS

Claims 1-29 remain present in this application. In the present Office Action: claims 1-29 were rejected under 35 U.S.C. § 112, second paragraph for allegedly being indefinite; claims 1-3, 5-7, and 21-23 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,396,154 (hereinafter “Hikita”); claims 15-19 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,576,589 (hereinafter “Dreifus”); claims 26, 27, and 29 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,296,391 (hereinafter “Hazama”); claims 4, 8-14, 24, and 25 were rejected under 35 U.S.C. § 103(a) over Hikita; claim 20 was rejected under 35 U.S.C. § 103(a) over Dreifus in view of U.S. Patent No. 6,329,715 (hereinafter “Hayashi”); and claim 28 was rejected under 35 U.S.C. § 103(a) over Hazama.

35 U.S.C. § 112, second paragraph, rejection of claims 1-29

With respect to the 35 U.S.C. § 112, second paragraph, rejection of claims 1-29, Applicants respectfully submit that the claims are definite in view of Applicants’ specification. Definiteness of claim language must be analyzed, not in a vacuum, but in light of the content of the particular application disclosure and the claim interpretation that would be given by one possessing the ordinary level of skill in the pertinent art at the time the invention was made. If the claims, read in light of the specification, reasonably apprise those skilled in the art both of the utilization and scope of the invention, and if the language is as precise as the subject matter permits, the statute (35 U.S.C. 112, second paragraph) demands no more. Shatterproof Glass Corp. v. Libbey Owens Ford Co., 758 F.2d 613, 225 USPQ 634 (Fed. Cir. 1985).

As is noted in Applicants’ specification, paragraphs [0027] through [0029], maintaining an isolation distance (of a predetermined amount) between differential input and output pins of a chip that corresponds to a characteristic of an associated external filter (e.g., a surface acoustic wave (SAW) filter) allows for formation of differential input and output pins of a receiver (e.g., a satellite receiver) on one side of a chip. In this case, differential input and output pins of another receiver (e.g., a terrestrial receiver) may also be, for example, provided on an opposite side of the chip (see Fig. 4).

With reference to Applicants' FIG. 3, a graph of a frequency domain attenuation characteristic of a SAW filter used in the receiver of FIG. 2 is illustrated. As is set forth in Applicants specification (paragraph [0019]), an ideal SAW filter has zero attenuation in the passband, infinite attenuation in the stop band, and an infinitely small transition band. A practical SAW filter, however, is lossy and has a small attenuation in the passband, high finite attenuation in the stopband, and a reasonably narrow transition band. Even with these characteristics, practical SAW filters provide excellent characteristics compared with other types of bandpass filters such as inductor-capacitor (LC) filters. As is set forth in Applicants' specification (at paragraph [0027]), in one embodiment, the predetermined amount corresponds to a stopband attenuation of an external SAW filter. If the Examiner maintains the rejection of claims 1-29 under 35 U.S.C. §112, second paragraph, Applicants respectfully request the Examiner suggest acceptable alternative language, such that the matter may be resolved prior to appeal.

35 U.S.C. § 102(b) rejection of claims 1-3, 5-7, and 21-23 as being anticipated by Hikita

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." Verdegaal Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987).

With respect to Applicants' independent claims 1 and 21, Applicants respectfully submit that Hikita does not teach an integrated circuit that includes a semiconductor substrate having first and second terminal pairs separated by a distance sufficient to maintain an input-to-output isolation therebetween that is based on an electrical characteristic, e.g., an attenuation in a stopband, of an external filter. While Applicants agree that the Hikita bonding pads are capable of being coupled to an external device, Applicants respectfully submit that the Hikita does not teach or suggest separating the Hikita bonding pads by a distance that is based on an electrical characteristic of any external device.

35 U.S.C. § 102(b) rejection of claims 15-19 as being anticipated by Dreifus

With respect to Applicants' independent claim 15, Applicants respectfully submit that Dreifus does not teach or suggest an integrated circuit that includes a semiconductor substrate having first, second, third, and fourth terminals corresponding and coupled to first, second, third,

and fourth bonding pads, wherein the first and second terminals are separated by a first distance sufficient to maintain a first input-to-output isolation therebetween that is based on a first electrical characteristic, e.g., an attenuation in a stopband, of a first external filter and the third and fourth terminal are separated by a second distance sufficient to maintain a second input-to-output isolation therebetween that is based on a second electrical characteristic, e.g., an attenuation in a stopband, of a second external filter. While Applicants agree that the Dreifus bonding pads are capable of being coupled to an external device, Applicants respectfully submit that the Dreifus does not teach or suggest separating the Dreifus bonding pads by a distance that is based on an electrical characteristic of any external device.

35 U.S.C. § 102(b) rejection of claims 26, 27, and 29 as being anticipated by Hazama

With respect to Applicants' independent claims 26, Applicants respectfully submit that Hazama does not teach an integrated circuit that includes adjacent first and second terminals and adjacent third and fourth terminals that are separated by a first distance sufficient to maintain an input-to-output isolation therebetween that is based on a first electrical characteristic, e.g., an attenuation in a stopband, of a first external filter and adjacent fifth and sixth terminals and adjacent seventh and eighth terminals that are separated by a second distance sufficient to maintain an input-to-output isolation therebetween that is based on a second electrical characteristic, e.g., an attenuation in a stopband, of a second external filter. While Applicants agree that the Hazama bonding pads are capable of being coupled to an external device, Applicants respectfully submit that the Hazama does not teach or suggest separating the Hazama bonding pads by a distance that is based on an electrical characteristic of any external device.

In response to Applicants' prior arguments, the Office Action at page 17 states "[t]his argument is not persuasive because the terms 'predetermined distance', 'predetermined amount' and 'electrical characteristic' are 'broad terms'." While Applicants agree that the term "electrical characteristic" is a relatively broad term, the term is fully supported in the specification and is used to further define how an input-to-output isolation of a predetermined amount is maintained and a predetermined distance between terminal pairs is set.

In response to Applicants' prior arguments, the Office Action at page 18 states "... every reference used in this or previous Office action fully disclose the following limitation

‘maintaining first and second terminal pairs of an integrated circuit package separated by a predetermined distance sufficient to maintain an input-to-output isolation therebetween of at least a predetermined amount that corresponds to an electrical characteristic of an external filter to which the integrated circuit package is configured to be coupled’⁴. Applicants respectfully submit that the applied references do not teach or suggest what the Office Action alleges in the preceding statement. While Applicants agree that integrated circuit packages have pins that are separated by a predetermined distance which would arguably provide some isolation between the pins, none of the applied references (alone or in combination) teach or suggest selecting a distance between integrated circuit pins to maintain an input-to-output isolation between the pins that corresponds to an electrical characteristic of an external filter to which the integrated circuit package is configured to be coupled. The Office Action has repeatedly failed to address this aspect of Applicants’ claimed subject matter. To reiterate, a claim is anticipated only if each and every element as set forth in the claim is found in a single prior art reference.

In sum, the rejections of Applicants’ independent claims 1, 15, 21, and 26 are in error, as none of the applied references, alone or in combination, teach or suggest separating terminal pairs of an integrated circuit by a distance sufficient to maintain an input-to-output isolation therebetween of at least a predetermined amount that corresponds to an electrical characteristic, e.g., an attenuation in a stopband, of an external filter to which the integrated circuit package is configured to be coupled. Additionally, Applicants submit that claims 2-14, 16-20, 22-25, and 27-29 are also allowable for at least the reason that the claims depend upon allowable claims.

CONCLUSION

Applicants respectfully submit that all of the claims are now allowable and therefore the present application is now in condition for allowance. Accordingly, the Examiner is requested to issue a Notice of Allowance for all pending claims. If, for any reason, the Office is unable to allow the Application on the next Office Action, and believes a telephone interview would be helpful, the Examiner is respectfully requested to contact the undersigned attorney.

The Commissioner is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account Number 50-3797.

Respectfully submitted,

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Date

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